Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Vol. VI. No. 25. December 9, 1909

THE JOURNAL OF PHILOSOPHY
PSYCHOLOGY AND SCIENTIFIC METHODS

CONCERNING A PHILOSOPHICAL PLATFORM[1]

THE philosophical convictions of individuals as well as philosophy itself may be considered from the point of view of evolution. They are in a constant flux, changing sometimes slowly and imperceptibly, sometimes almost abruptly; and the apparently stationary elements may still be considered as changing with a speed approximating zero. However, to make this flux intelligible, we must break it up, we must make sections, that is, we must distinguish *definite stages* from which and toward which the evolution is conceived to take place; these stages will usually be points where more or less pronounced changes take place, or they may simply be determined by time-intervals. The apparently natural flux is, thus, more or less arbitrarily broken up into a number of points which indicate its flow, just as, in geometry, the arbitrarily chosen points indicate the curve. If evolution is the problem, it is clearly necessary to choose as many points in the development as possible, and the *continuum* must always be the ideal which we try to approximate. The discrete points are merely the scaffolding; they are, though necessary, purely auxiliary, to fix and comprehend the evolution.

We have become so embued with the spirit of evolution that we sometimes seem almost unable to treat things with any but its categories, to conceive it as the only "natural," the all-important "generating problem." Whilst, of course, no one dreams of denying its legitimacy and possibility, it is still important to urge that other points of view are possible, other "generating problems" to the solution of which evolution makes no contribution whatever. Such a point of view is *value,* and it is the decisive one if our philosophy is to become a basis for *action;* then this whole process of evolution may still be admitted, but is of no consequence; the views I hold now are, then, what concern me; I must "make up my mind," "make my choice''; neither the ultimate philosophy, nor the absolutely best philosophy, but the best within reach, the best in so far forth, will be the determining one. Those definite stages, which were, from the point of view of evolution, though necessary, still purely auxiliary, are now the controlling idea. And this present stage of development in my philosophical convictions which shall form the basis of my present action must be the more definite, specific, and articulate, the more definite, specific, and articulate the conditions of my action are. Not that we always consciously formulate our convictions, but our actions commit us to certain convictions; we act, at least, *as if* we had them.

---

[1] Read, in part, at the meeting of the American Philosophical Association in Baltimore, 1908.

Now my thesis is that philosophy itself is called upon to act, and that therefore it is incumbent upon every age to make up its mind, to occupy and maintain some definite stage in this process of evolution that philosophy is undergoing, and not to use the idea of evolution as a convenient excuse for indefiniteness and absence of a doctrine and recognized school in philosophy.

That philosophy is, indeed, required to act I shall show in typical instances.[2] These are chosen from the realm of ''science,'' not because here alone they are to be found, nor even because they are the most important and urgent; theology and law make very definite demands upon philosophy. The reason is merely the personal one, that to me the philosophical needs of mathematics and natural science have been more pressing and immediate than those of the other disciplines.

Like most of you, who have not an own system to recommend and to defend, I have been dissatisfied with the philosophies that have come to my knowledge, living as a quiet student in the hope and quest of a world-view that would answer my needs. And, so far as my philosophy alone is concerned, what possibility is there but to patiently work and wait until the crystals form in the mother-lye? But the *social* function and duty of philosophy in the republic of knowledge was forcibly brought home to me by reading a book by Dr. Paul Dubois, of the University of Berne, on "The Psychic Treatment of Nervous Disorders." Not satisfied with merely giving a description of methods that he had found useful, the author seeks a philosophical foundation of his theory. And, indeed, complications with philosophy are unavoidable to any but mere routine and surface-workers! It is particularly the concept of moral responsibility that engages his attention. No one with any philosophical interest at all can have made even a superficial study of neurasthenia in any severe form without meeting this concept and its bearings at all times. The conviction of powerlessness seems the predominating feature of the disease, the inability of the patient to see and to accept what is perfectly clear to you, and, if you succeed in convincing him by repeating again and again the same argument in all possible variations and luckily striking the form that appeals to him, the inability, at least at the time, to carry it out in action; and all this in people who otherwise have shown clearness of mind and great strength of character. Now it is indeed of interest, but of no consequence here for us, who are not discussing moral freedom and responsibility, that Dr. Dubois most emphatically rejects this concept as contrary to all plain reason and unfit as a working hypothesis in his field; but it is of consequence to us that in his philosophical need the excellent author should have been left without any recognized doctrine of ethics to accept or to combat. Not that he failed to look around for information! But the case is typical. The other disciplines have to rely on the results that philosophy reaches; deep, original, and path-breaking minds are fully aware of this, but are thrown back on their own resources, their own reason, this "most precise instrument of work," as Dr. Dubois calls it, after a vain quest for definite results that could be used.[3] And what else can the scientist do so long as the workers in the various branches of philosophy are agreed neither as to the fundamental problems they set out to solve, nor in the solutions they offer, nor even in the ideal they strive to attain? Is the fundamental problem of ethics the description of so-called moral actions, or is it to find their cause in a so-called moral sense, is it to discover and establish moral values, an *"Umwertung der Werte,"* or is it the examination of the idea and of the principles of a possible pure will, or is it something quite different from any of these? Is the scientist supposed to take his choice according to what appeals to his reason? Or must it be admitted that the reason of the expert is the more precise instrument of work and ought to decide here, as it does in the other disciplines? And do we find any better agreement, if we ask: what is the fundamental problem of philosophy itself? And if we ask totally different questions, how can we expect agreement in the answers? But why accumulate instances, when we all are ready to admit[4] that no branch of philosophy has, in the republic of knowledge, performed the duty which is its part to fulfil.

---

[2] In doing this I have sometimes felt as if I were carrying coals to Newcastle; the only question of real importance seemed: How can we make possible such a platform as this necessity for action demands? Still, it appears, in the light of the discussion at the Baltimore meeting (which Professor Creighton continues in his paper in this JOURNAL, supported by Professors Davies and Leighton), that to others such an agreement does not even seem *desirable;* but it will have to be admitted that, where there is a question of *necessity,* the desirability must be a neglected issue. The justified element in the aversion to a platform, which is expressed in this lack of desire for it, will, I think, be satisfied by the idea of "equivalent systems of philosophy," which I develop later in this paper. But if the opponents imagine that "agreement" means necessarily slavish adherence to the same system, I merely point to mathematics, where such agreement as I mean already exists compatible with that freedom which Georg Cantor, I believe, declared to be the "essence of mathematics."

---

[3] Both Professor Creighton and Professor Leighton deny the possibility or desirability of furnishing such definite results, and both deduce this definite result "from the very nature of philosophy." See this JOURNAL, Vol. VI., pp. 142 and 520. I must confess the cogency of their reasoning escapes me, particularly as both profess, on almost the same page, that a platform does already exist! Leaving, for the moment, the question of possibility aside, I ask: Do you mean to deny that it is incumbent upon philosophy to furnish some definite results in such a question as moral freedom? To be frank, I believe that at bottom we are really agreed on the necessity of supplying such definite results; but, overawed by the conceived enormity of the undertaking, we despair of its possibility and try to resign ourselves to the belief that, philosophy not being "one of the special sciences" (p. 142), "assured results" (p. 520) can not be expected of it. But I beg you to ponder the consequences of such resignation!

But if no accepted solutions exist of questions, such as that of moral responsibility, which lie *completely within* the realm of philosophy, still less can we expect any agreement regarding problems *in the sciences themselves* that call for a philosophical solution. Take, for example, the work of modern mathematicians on the axioms of mathematics. I will not contend here that this would have to be considered as a philosophical question, if we assume that philosophy is "the science of first principles."[5] But consider: the geometers establish the axioms of geometry; the algebraists offer those best suited to their department. They find that, in either case, there is a choice among various sets and discuss their respective values according to definite principles. However, whilst it is, no doubt, important to keep the lines of demarcation between algebra and geometry, it is, on the other hand, undeniable that such mutual independence is true only in methodical abstraction, and that they not only interpenetrate each other in the application of one to the other, but that they have common hypotheses and concepts. And before we can, therefore, adopt a set of axioms as best suited to either department, it will be necessary to consider the sets in their relation to each other; and it may be necessary to adopt a set of axioms for mathematics itself, considered as a whole, which would be the best neither for algebra nor for geometry taken separately; the question of the axioms of mathematics, as distinguished from the axioms of algebra or geometry, presents itself. However, so far, it may be maintained, we are still in the realm of mathematics; let mathematicians take care of these axioms! But the connection of algebra of logic with algebra and even with geometry,[6] of mathematics with mechanics and physics and even metaphysics, demands consideration; and the whole question, as it deepens, widens until it bursts the bounds of any one special science; it becomes ultimately one of a group of problems to which the name ''philosophical'' has been vaguely attached.[7]

---

[4] Nothing is more apt to prevent the proper solution of a problem than to imagine that it already *exists*, at least within the limits in which it is possible of attainment. This is the position of Professors Creighton and Leighton. However, one need only look through the papers read at the Congress of Arts and Sciences in St. Louis to be impressed by the uniformity with which the various speakers on philosophy give utterance to the necessity of coming to an agreement on the "definition" of "metaphysics," "logic," "ethics." Of course, there is *implicit* agreement; but such implicit, I almost said *instinctive*, agreement is not sufficient to base any reasoning upon; the agreement, to be serviceable in the various problems of which I mention types in the first part of my paper, must be *explicit, definite.*

[5] See Kant's remarks on this "definition" of philosophy in the "Critique of Pure Reason," p. 545 (academy edition, Vol. III.).

But no set of axioms is possible without a set of fundamental concepts. Mathematicians have, of late, come either to consider these fundamental concepts as defined by the axioms (as Hilbert and others), or to define them in terms of ''logical'' concepts, and to use these definitions in the place of axioms in building up their systems (as Dedekind has done). I will not dwell on the question of the relation of an axiom to a definition which is raised by these different procedures, and which seems to me eminently a philosophical question, the careful treatment of which would help to clear many points of method at present under discussion; but I will emphasize that these fundamental concepts, however supreme the importance of their treatment by the scientist, can not ultimately be chosen by any single discipline such as mathematics or mechanics; we know now that, so far as they are concerned, a choice is possible among various groups of fundamental concepts (though it is still an open question how far we are free to choose); and scientists will select those that work best in their realm; but the very ideal of cognition which the scientist is following pushes this question beyond the bounds of science to the problem of categories, which, in turn, must influence the choice of fundamental concepts in the special sciences. Besides, these fundamental concepts have their realm, whose proper determination and consequent limitation requires a distinct (and we may call it a philosophical) investigation.

---

[6] See Professor Royce's paper, in the *Transactions of the American Mathematical Society,* July, 1905, on "The Relation of the Principles of Logic to the Foundations of Geometry."

[7] As no generally accepted definition of "philosophy" exists, so far as I am aware, I shall, in claiming any group of problems to fall within the realm of philosophy, apply here, besides the usual meaning of the term, the negative test: *not* problem of any of the recognized special sciences.

As a third problem arising within science that calls for a philosophical treatment I will mention the principles by which the scientist determines the value of the various possible sets of axioms. These principles, their establishment, examination, and methods of proof are so closely connected with purely logical considerations that fall outside the scope of any "scientific" department as to make them a proper province of philosophy. Still more will this be evident, if we consider that they define an *ideal* of science. For this ideal is in opposition to other ideals, and needs, therefore, an examination of its own value and competence. It may be, as some have claimed, a mistaken, or even impossible, ideal, it may be the only true ideal of cognition; in either case, the question can not be decided by the scientist himself any more than it can be decided without him and his labors.

Lastly, let me call attention to such questions as the *definition* of mathematics. This, surely, can not concern anybody but the mathematician himself, so it seems. And, indeed, if we merely want to collect the common characteristics of the recognized branches of mathematics into a *descriptive* definition (if I may use this expression), this may be so. And yet, even then, do we soon strike such questions as: Is arithmetic (and with it algebra and analysis) a part of logic, as Dedekind, Schröder, and others have maintained, or is logic (mathematical logic) a part of algebra, as Whitehead, Couturat, and others have treated it, or are logic and mathematics really one and the same, as Russell is inclined to think? But above all, how barren such a definition would be! A real definition must be a program of work; it must be systematic; mathematics would then be considered as a part of the whole system of cognition, a part with its definite function which can be properly assigned only by a consideration of the whole.

I have thus briefly indicated definite questions where philosophy is called upon to act; their answer presupposes a definite system of philosophy; and no one can, with an open mind, have followed the discussion on the principles of mathematics or of mechanics without noticing at every step, half hidden, half acknowledged, the philosophy of the system-building scientist. And how often are his efforts paralyzed because, after all, the philosophy is only *his* philosophy! But on which system shall he rest his work, if all is controversial? Shall it be left to the chances of a necessarily limited education and to his private opinion? And a mere outline, a general world-view, is not sufficient; the questions met with are definite, specific, articulate, and require a correspondingly definite, specific, and articulate philosophy; that is, they require a *system* of philosophy. How can it be provided?

In spite of the repeatedly emphasized differences between philosophy on the one hand, mathematics and the physical sciences on the other, it seems to be growing more and more apparent and recognized that they all cooperate on one general problem, namely, the establishment of a system of interrelations between the concepts necessary and sufficient for the solution of the various special problems which we set ourselves and for which the term ''experience'' stands. If we look thus at the so-called special sciences it must be to us in our distress a comfort to notice that mathematics and physics have already attained that steady progress and orderly procedure which make every honest piece of work a contribution, however modest, to the advancement of science. Their example which we need not imitate, may, nevertheless, be instructive. How is it possible that, with absolute freedom of research and opinion, order and uniformity in the department are maintained; how is it possible that, in spite of uncertainty on many points and dissension of opinion, a definite, recognized, and serviceable doctrine is maintained; how is it possible that, in spite of revolutionary discoveries, science is steadily moving on without losing the confidence placed in it? It certainly is possible. What can be done to reach this same condition in philosophy?

Few even of the mathematicians are quite clear about the changes in the appearance of geometry that would result from the adoption of one of the new sets of axioms that have been worked out of late, even if we consider only those that restrict themselves to Euclidean plane geometry. In mechanics, it may seem a trivial difference whether we take as fundamental concepts space, time, mass, and force, or only space, time, and mass, adding an hypothesis which shall be the equivalent of force; and yet, what a difference in the appearance of Newton's and Hertz's systems of mechanics! Such changes as the modern work on the foundations of mathematics and mechanics involve are nothing short of revolutionary! And yet, if the engineering student calls in the help of geometry, it is still Euclid's geometry that is offered him and that serves him; if he needs mechanics, it is Newton's system; in spite of the trenchant criticisms that have been leveled against Euclid's axioms, in spite of the doubts of the logical purity of Newton's system that troubled Heinrich Hertz! To be sure, the work of all these investigators is not done in vain; slowly and steadily mathematics and science will absorb their results. However, it will be a transformation, not a revolution; the good of the new will be blended with the good of the old, after the alternatives have been weighed sufficiently. The momentum of the school acts like a fly-wheel to keep a science from erratic and premature changes. This steadiness is indispensable for making possible the serviceableness of science. We have shown in typical instances that philosophy also is called upon to act; it can not act without having a definite form which we must choose and maintain comparatively invariant. But a definite form of philosophy as such, not of individual convictions, means a recognized doctrine and school; or, if you please, a ruling party, which shall transact the business on hand, until it (which means its principles) is replaced by the opposition party, whose very existence and criticisms are necessary for a healthy growth and functioning of the ruling party itself. And I see no escape from the thought, reactionary or even ridiculous as it may seem, that we philosophers must, *for a start,* deliberately choose a system on which we are most ready to unite, not because it will fit any one of us exactly—none does but our own home-spun—but because we must have something definite, until we can, clearly and consciously, make the change to a new school-philosophy. The abolition of a recognized authority in philosophy by the renaissance, however we may be in sympathy with the new spirit, has been a decided disadvantage. We philosophers are too much possessed with the destroying instinct, though, in fact, we never do as much harm as we set out to do. Even the most original thinkers (such men as Kant, who appeared to his contemporaries supremely as the *Alleszermalmer*), how conservative after all, how much of the *perennis philosophia* in their thought and systems! The state of anarchy, which, in spite of the temporary successes of Descartes, Leibniz, Kant, and Hegel in establishing schools, is still prevailing, must end; this we all feel and the necessity for action demands it. Let us then learn this as a lesson from mathematics and science: to choose a system as authority with which we can start, which we can criticize, measure by certain ideals, change, mend, supplement or finally discard for a better, but all with due deliberation and for definite, specific reasons. For the promotion of such an end, the meetings and discussions of the Philosophical Association seem to offer a suitable opportunity.

However, such an agreement, even if possible, could only be considered as a starting-point demanded by the exigency. We must examine the authority, we said, improve it or discard it for a better system. Such systematic and persistent criticism is, indeed, the safety-valve which should prevent sudden revolutions; but it implies that we have an *ideal,* by which to measure the school-philosophy itself as well as our own efforts; otherwise, we can not know whether we are really advancing, *or even what an advance means.* And again, no vague ideal, such as we all more or less unconsciously carry with us, will do for such definite work as is necessary; no mere hunting for contradictions—critique, systematic and according to well-established *principles,* is what we need here; these principles should completely define the ideal of philosophy; they may be conceived as *conditions* which systems of philosophy must satisfy. This implies, further, that definite methods should be developed by which we can test the satisfaction of our principles in any concrete case. Mathematicians and scientists have, during the past century, more and more completely defined their ideal.[8] The same should be done for philosophy, and the work already done by mathematicians will be of the greatest value. This ideal, set forth in definite conditions, with their tests, will be the instrument by means of which we, in submitting ourselves to the authority, work out our own independence and true originality.

These principles of ''critique of cognition'' will be directly applicable to systems of philosophy, if the latter can be given a special form, which I will call the ''generating-problem-deductive-system'' form, or more briefly the ''complete-deductive'' form. I shall explain what I mean by this, show, by an investigation of the conditions under which the transformation is possible, that any system of philosophy can be brought into this form, and indicate the advantages gained by this transformation; they cluster around the important concept of *''equivalent systems'' of philosophy,* a concept, already familiar to mathematicians, which, if introduced into philosophy, will open up new fields of inquiry of the utmost importance for the idea of a philosophical platform.

The idea of a ''deductive system'' is familiar to all; its classic representative is Euclid's system of geometry. Its essential features are the definitions, the axioms (postulates, etc.), and the propositions which are ''proved'' by means of the axioms and definitions. These proofs consist mainly in the exhibition of the *interrelation* between propositions and axioms. The modern work on the foundations of mathematics has shown that the difference between proposition and axiom is not radical, that they may be interchanged (which change will, of course, produce different systems). We may therefore say: the deductive system exhibits the interrelation between the various propositions of the system. The system may be considered as a ''tissue,''[9] which the deductive system presents in a polarized, or directional, form. This form, artificial in that it makes fundamental the, otherwise irrelevant, *order* of the propositions, offers definite advantages, although they are not the ones which were expected by the originators of the form: they thought that by the "proofs" the "difficult propositions were made to participate in the clearness of the "self-evident" axioms.[10] It quite often happens, in mathematics, that the axiom is much less "self-evident" than the proposition which is proved by its assumption. The advantages seem to lie rather in this: (1) the deductive form is, thus far, the only one which really does completely exhibit the all-important interrelation between the various parts of the system, so that any assertion or denial becomes *more momentous,* so to say, by the consequences that we *know* are involved in it; (2) we can in this form most easily ascertain whether the propositions of the system *apply* in any particular realm, by merely investigating whether the "axioms" are applicable in the realm; (3) we can in this form best ascertain the *limits* of the applicability of the system (*i. e.,* determine the realm of the generating problem); and (4) we can most readily determine whether any two systems are *equivalent* or not. And this last advantage is the one I want to emphasize here.

---

[8] See my paper on "Critique of Cognition and Its Principles," this JOURNAL, Vol. VI., p. 281.

[9] See Mrs. Ladd Franklin's paper on "Histurgy," read before the American Philosophical Association in Baltimore, 1908; also Schröder's "Algebra der Logik," Vol. II., part 1, p. 55. Mrs. Franklin's paper should be consulted for the whole question of a philosophical platform. See the briefer form of Mrs. Franklin's paper in the "Proceedings of the Heidelberg Congress of Philosophy" for 1908.

But before entering into the question of equivalence, I will briefly state the necessary and sufficient condition which a system must satisfy so as to be transformable into this form. This condition follows immediately from the "definition" of a deductive system; it requires that the propositions of the system are *fixed, non-equivalent,* and *interrelated. And this condition any system of philosophy is supposed to satisfy; it can, therefore, be put into the deductive form.*

It remains to show briefly what is meant by the "generating problem" of a system. In the above account of the deductive form the axioms are said to be "assumed." This hypothetical character gives them an appearance of arbitrariness which in reality they do not have, as becomes clear if the system is considered as the *solution* of a *problem.* This problem, once stated and recognized, can be logically considered as generating the system; the axioms derive their necessity, not from any superior clearness or immediate evidence (which they, in mathematics at least, certainly and admittedly do not possess), but from the fact that they are necessary for the solution of the once accepted problem. Such a problem I have therefore called the "generating problem,"[11] to distinguish it from the "special problems" that are considered as logically underlying the special propositions. So we may consider as the generating problem of mechanics: "to deduce from the properties of material systems which are *independent* of time, their phenomena which occur *in* time, and their properties which depend *on* time." I take this statement from Heinrich Hertz's "Principien der Mechanik" merely on account of its clearness and articulateness. I can not dwell here on the advantages of thus conceiving a system; but it is clear that the definition of a science like mechanics can best be given in terms of its generating problem. And we can now conceive of a *system of problems,* in which each generating problem itself may play the rôle of a special problem. Such a system of problems would then determine a purely logical classification of sciences, and each special science would be the realm determined by its generating problem. It would greatly contribute to a mutual understanding amongst philosophers, if we could determine the generating problem of philosophy, or, at least, of its recognized branches. Indeed, this question or an equivalent of it will clearly have to be settled before we can define, by a group of conditions, either the scope or ideal of philosophy: it must be settled what we start out to do, when we develop a system; and what we start out to do, definitely and completely stated, will constitute the generating problem. In such a statement a great amount of freedom will be left; history will in part serve as a guide, but only in a comparatively small degree; for what has been considered the generating problem of a system may be extremely valuable as a hint, but need not necessarily constitute, or even be contained in, the true generating problem; questions of logical subordination will play an important part here; ultimately the systematic point of view will be decisive. Such specific and definite statement of the generating problems will result, I believe, in an increase in the number of recognized branches of philosophy and a consequent corresponding cessation of strife on fundamental questions.

---

[10] Plato, who ought to be considered the true originator of the form, did not fall into this error; the starting-point of his deductions is not the "self-evident" axiom, but the *hypothesis* which the interlocutors grant. Modern investigators are more Platonic in this respect than the early successors.

[11] See the aforementioned paper on "Critique of Cognition."

So much, then, for the explanation of the term "complete-deductive-system." We are now prepared to state what is meant by "equivalence" of any two systems of philosophy. Let us call the two systems under investigation S_1 and S_2. They will be called equivalent, $S_1 = S_2$, if they satisfy the following conditions: (1) the generating problem of S_1 is contained in that of S_2, and *vice versa;* (2) the solution of the generating problem of S_1 can be deduced from that of S_2, and vice versa.[12] If , now, the system under investigation is transformed into the "complete-deductive-system" form, we need merely to establish, besides the equivalence of their generating problems, the equivalence of their "axioms." If this is possible we can immediately assert: any special problem which can be solved in the realm of S_1 can also be solved by the "axioms" of S_2. The systems are "practically" (namely with respect to their conceivable consequences) the same—though they may be very different in structure and appearance. But for purposes of a philosophical platform any one system may be *replaced* by any other which is equivalent to it. The determination, whether any two systems are equivalent or not, becomes, therewith, itself a momentous question. Non-equivalent systems may then be considered from the point of view of exclusion or inclusion; non-equivalent systems may often be *made* equivalent by adding further conditions. But we can not here follow up these remarks any further, excepting to point out the effect this idea of a generating problem and of equivalent systems has on the study of the so-called history of philosophy, the importance of which Professor Creighton has urged in his paper on the question of a philosophical platform in this JOURNAL. The usual method emphasizes the point of view of evolution. This is of course itself a perfectly legitimate generating problem; but so far as the question of a philosophical platform is concerned—*i. e.*, the question which system we should accept as our system—this evolution history of philosophy is of no importance except incidentally. However, this mass of material which is represented by the philosophical systems of the past may be organized and made available for our question, if we treat it from the point of view of the generating problem. By this I mean: to make the paramount interest not the genesis of a system, its "history," the vestiges of the past and the germs of the future, but is purely *logical* content, by asking, What are the generating problems of the various systems and what their solutions; and are they, in spite of all apparent differences, equivalent with respect to completeness or not? Here is a broad field, almost untouched, of "historical" research of the utmost value to the "working" philosopher (if I may adopt a phrase often used by mathematicians), work which can be done by specialization in any one particular field, without presupposing an almost impossible amount of knowledge; and our "histories" of philosophy, in giving up a pretended breadth, would increase their depth immeasurably.

---

[12] It is easy to notice that, in the language of my paper on "Critique of Cognition" this means that S_1 and S_2 have the same "completeness"; this is, indeed, here the important point of view; but, strictly speaking, this point of

view should always be stated in any assertion of equivalence; we might, therefore, say that S_1 and S_2 in our definition are *equivalent with respect to completeness;* whilst by equivalence without specification we might mean that S_1 and S_2 satisfy *all* the conditions of "critique of cognition."

Having proceeded thus far in this formalistic direction, I can not but take a further step and urge the use of so-called symbolic logic which seems, until recently, to have had the luck of falling between the chairs of mathematics and logic, the mathematician spurning it as logic, the logician saving himself needless exertion because it was only ''algebra.'' I will not insist on it here as an engine of invention, as a method of solving problems which are as inaccessible to common unaided reasoning (even if highly developed and drilled in our ordinary logic), as problems in algebra are to one who is master merely of arithmetic; but I will urge the advantages to be gained by the adoption of a precise means of expression, far superior to any *verbal* statement in exactness, simplicity, and lucidity.[13] To be sure, in ''Algebra of Logic'' we find again the same lack of agreement, the various schools clinging to their own special symbolism; this is, however, of smaller consequence and can largely be made harmless by proper ''keys'' to translate from one into the other. But the question whether ''symbolic'' logic should be used at all or not, ought to be fairly settled, not by clever writers unfamiliar with its first principles, but by the consensus of the competent. Generating problems and their solutions, transformed into the deductive form, stated in symbolic language and so made accessible to the same treatment which systems of principles of mathematics are receiving, how wonderful the possibilities!

Further methods could be made available, such as the ''method of limitation and extension,'' ''the hypothetical method.'' But more important, perhaps, than any suggestion of procedure is the replacing of the petty criticizing spirit prevailing among us philosophers by the mutual understanding of cooperation. As the problems become crystallized and purged of their antiquated, impure statements, as philosophers become more and more conscious of the true infinity of their special problems, and how often antagonism is really based on differences in the generating problems, philosophy will be developed as a system, not of individuals, but of humanity itself.

KARL SCHMIDT.

PEQUAKET, N. H.

---

[13] Incidentally, I may call attention to Lüroth's remark in the posthumous edition of the second part of volume two of Schröder's "Algebra der Logik," that it is doubtful whether it will be possible to bring together the material for the second part of volume three, which was to treat of the *logical* side of the algebra of relatives.